FIG. 1 (PRIOR ART)

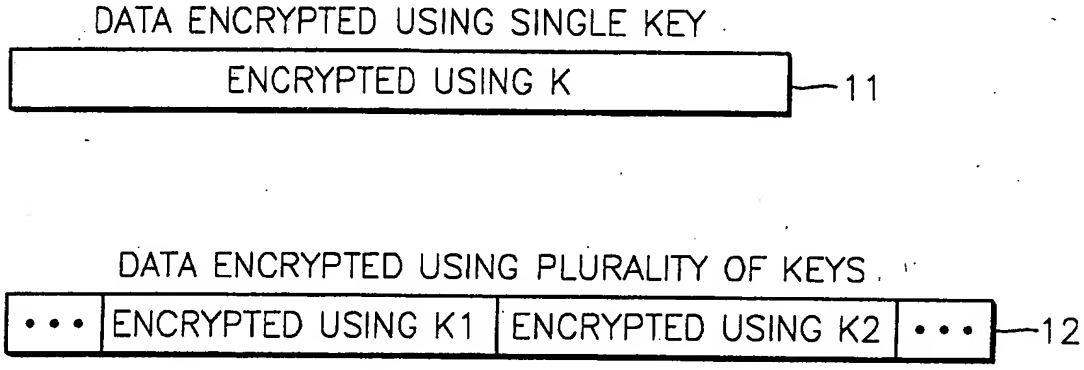


FIG. 2 (PRIOR ART)

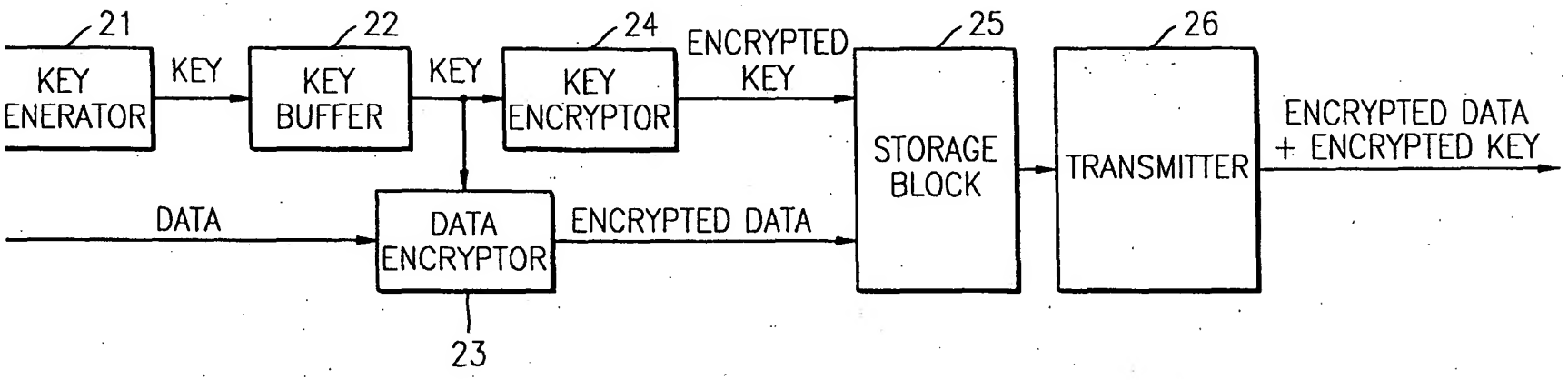


FIG. 3 (PRIOR ART)

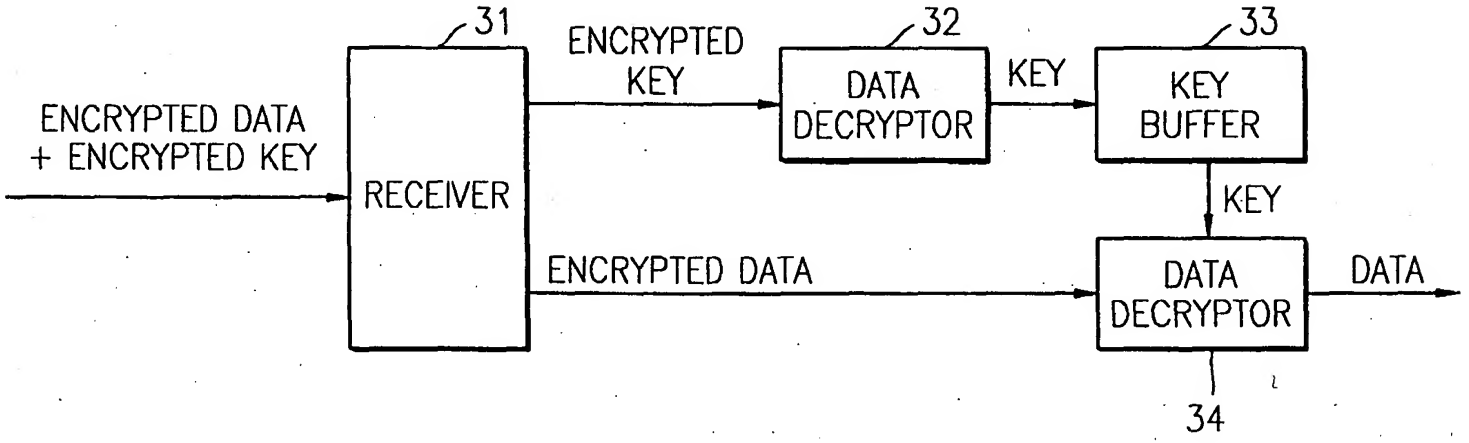
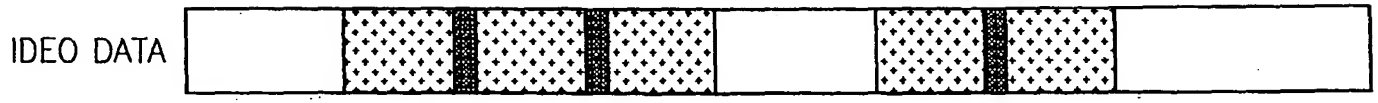


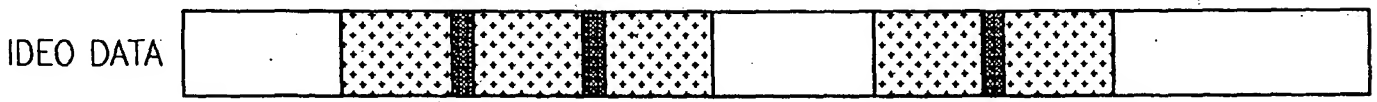
FIG. 4 (PRIOR ART)



: ENCRYPTED USING K1
: ENCRYPTED USING K2
: ENCRYPTED USING K3

OBJECT TO BE DECRYPTED	KEY TO BE TRANSMITTED
KEY FRAME	K1
KEY CLIP	K1, K2
ENTIRE VIDEO DATA	K1, K2, K3

FIG. 5



: ENCRYPTED USING K3
: ENCRYPTED USING K2
: ENCRYPTED USING K1

K3=FUNC2(K2)
K2=FUNC1(K1)
FUNC1, FUNC2: ONE-WAY FUNCTION

OBJECT TO BE DECRYPTED	KEY TO BE TRANSMITTED
KEY FRAME	K3
KEY CLIP	K2
ENTIRE VIDEO DATA	K1

FIG. 6

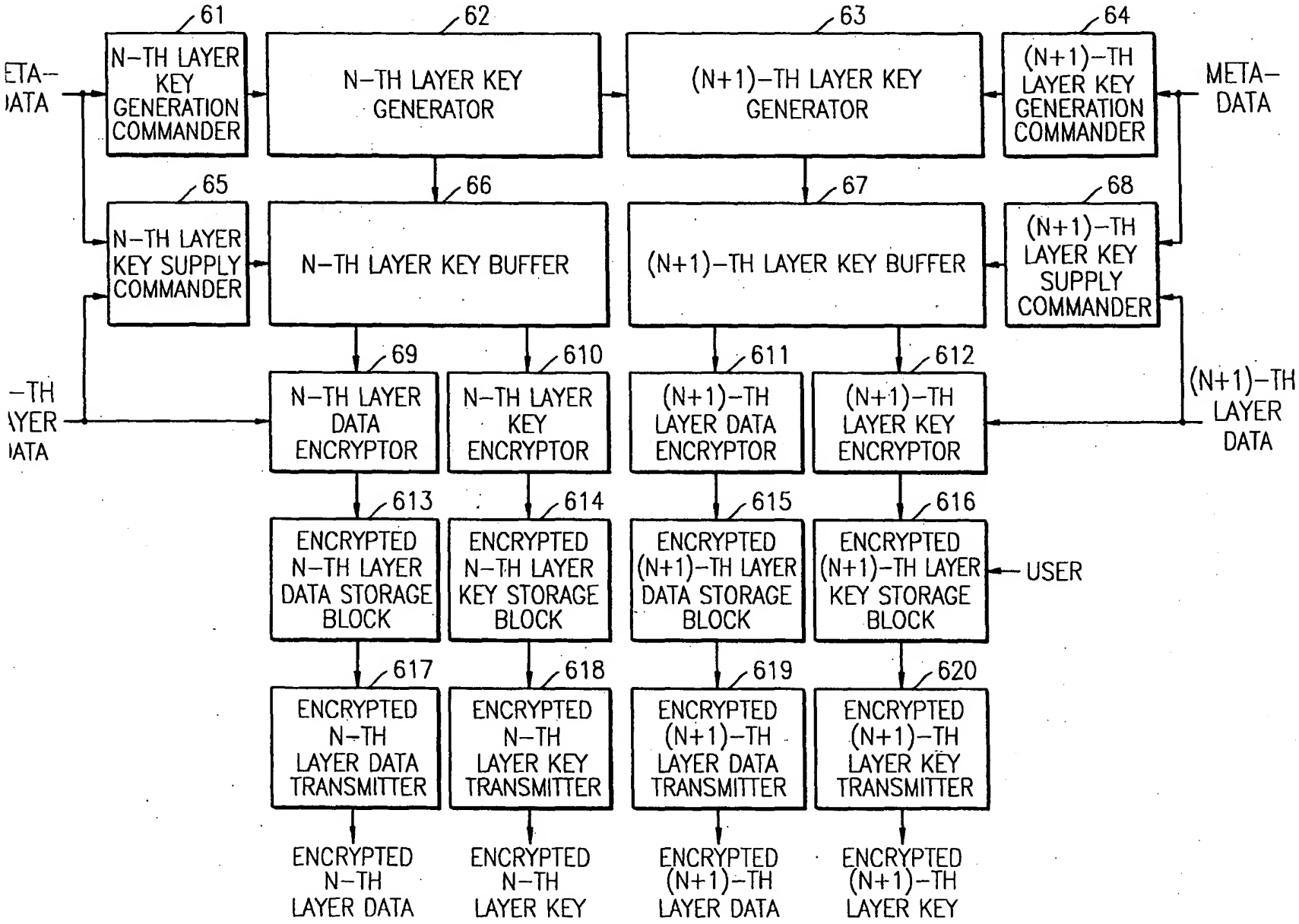

61
62
63
64
ETA-
ATA
N-TH LAYER KEY GENERATION COMMANDER
N-TH LAYER KEY GENERATOR
(N+1)-TH LAYER KEY GENERATOR
(N+1)-TH LAYER KEY GENERATION COMMANDER
META-DATA
65
66
67
68
N-TH LAYER KEY SUPPLY COMMANDER
N-TH LAYER KEY BUFFER
(N+1)-TH LAYER KEY BUFFER
(N+1)-TH LAYER KEY SUPPLY COMMANDER
69
610
611
612
-TH
AYER
ATA
N-TH LAYER DATA ENCRYPTOR
N-TH LAYER KEY ENCRYPTOR
(N+1)-TH LAYER DATA ENCRYPTOR
(N+1)-TH LAYER KEY ENCRYPTOR
(N+1)-TH LAYER DATA
613
614
615
616
ENCRYPTED N-TH LAYER DATA STORAGE BLOCK
ENCRYPTED N-TH LAYER KEY STORAGE BLOCK
ENCRYPTED (N+1)-TH LAYER DATA STORAGE BLOCK
ENCRYPTED (N+1)-TH LAYER KEY STORAGE BLOCK
USER
617
618
619
620
ENCRYPTED N-TH LAYER DATA TRANSMITTER
ENCRYPTED N-TH LAYER KEY TRANSMITTER
ENCRYPTED (N+1)-TH LAYER DATA TRANSMITTER
ENCRYPTED (N+1)-TH LAYER KEY TRANSMITTER
ENCRYPTED N-TH LAYER DATA
ENCRYPTED N-TH LAYER KEY
ENCRYPTED (N+1)-TH LAYER DATA
ENCRYPTED (N+1)-TH LAYER KEY

FIG. 7

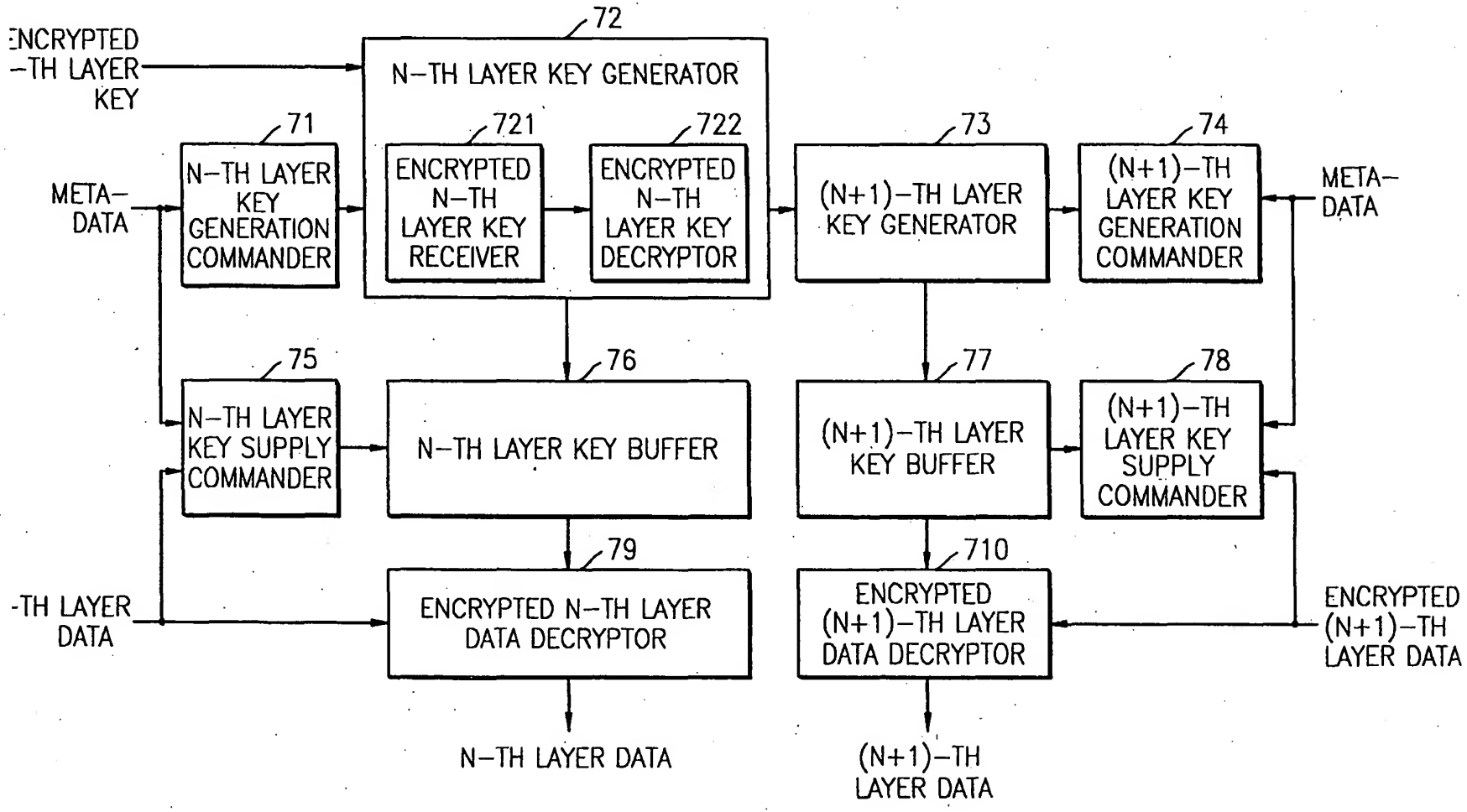

ENCRYPTED N-TH LAYER KEY
72
N-TH LAYER KEY GENERATOR
META-DATA
71
N-TH LAYER KEY GENERATION COMMANDER
721
ENCRYPTED N-TH LAYER KEY RECEIVER
722
ENCRYPTED N-TH LAYER KEY DECRYPTOR
73
(N+1)-TH LAYER KEY GENERATOR
74
(N+1)-TH LAYER KEY GENERATION COMMANDER
META-DATA
75
N-TH LAYER KEY SUPPLY COMMANDER
76
N-TH LAYER KEY BUFFER
77
(N+1)-TH LAYER KEY BUFFER
78
(N+1)-TH LAYER KEY SUPPLY COMMANDER
79
ENCRYPTED N-TH LAYER DATA DECRYPTOR
710
ENCRYPTED (N+1)-TH LAYER DATA DECRYPTOR
-TH LAYER DATA
ENCRYPTED (N+1)-TH LAYER DATA
N-TH LAYER DATA
(N+1)-TH LAYER DATA

FIG. 8

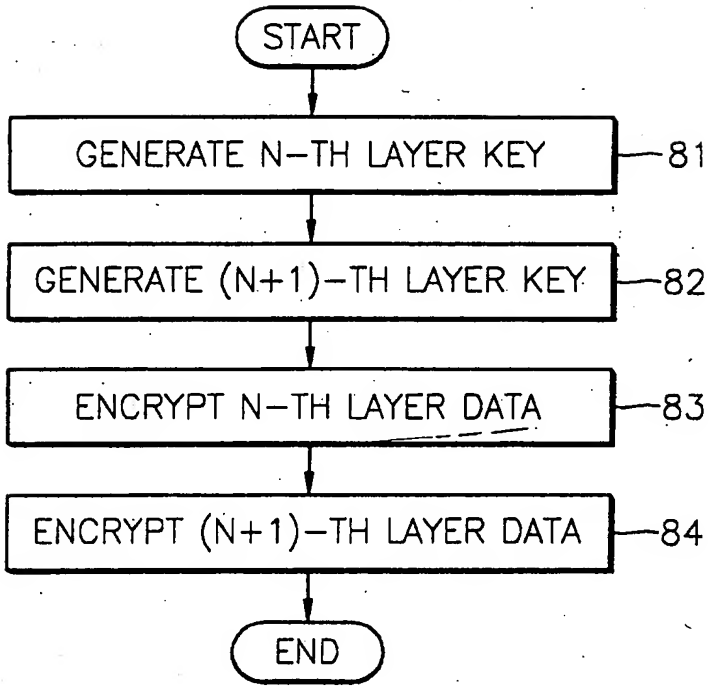
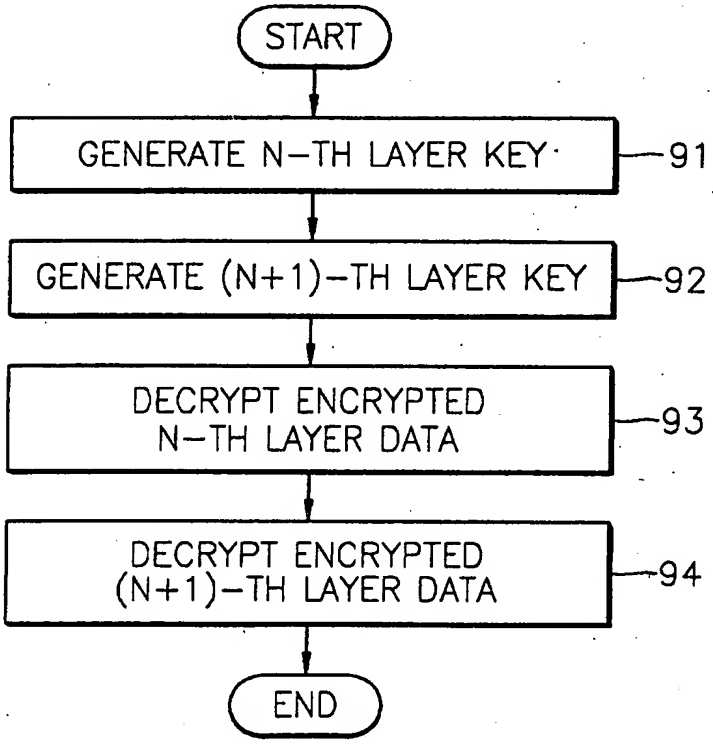

START
GENERATE N-TH LAYER KEY
81
GENERATE (N+1)-TH LAYER KEY
82
ENCRYPT N-TH LAYER DATA
83
ENCRYPT (N+1)-TH LAYER DATA
84
END

FIG. 9


START
GENERATE N-TH LAYER KEY
91
GENERATE (N+1)-TH LAYER KEY
92
DECRYPT ENCRYPTED N-TH LAYER DATA
93
DECRYPT ENCRYPTED (N+1)-TH LAYER DATA
94
END